**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A <u>computer implemented</u> method in a data processing system for monitoring the execution of a compiled program having a set of groupings, the <u>computer implemented</u> method comprising:

selecting a grouping from the set of groupings for the compiled program to form a selected grouping;

<u>determining, for each instruction in the selected grouping, whether an indicator is present, wherein the indicator is a portion of the instruction and wherein the indicator indicates that data on an execution of the instruction by a processor executing the instruction is to be generated;</u>

<u>responsive to the determining that the indicator is present, sending a signal to a performance monitor;</u>

~~associating a set of indicators with instructions in the selected grouping within the set of groupings, wherein the set of indicators provides data on the execution of the instructions by a processor executing the instructions;~~

<u>generating the data on the execution of the instruction responsive to the indicator being present during execution of the compiled program; and</u>

~~executing the compiled program, wherein data is generated in response to a determination that an instruction of the instructions is associated with an indicator in the set of indicators, the data comprising at least one of a number of times each instruction in the selected grouping has been executed and a number of visits to the selected grouping; and~~

~~collecting~~ <u>storing</u> the data <u>on the execution of the instruction.</u>

2. (Currently Amended) The <u>computer implemented</u> method of claim 1 further comprising:

repeating the selecting<u>, determining, sending, generating, and storing</u> ~~associating, executing, and collecting~~ steps for all groupings in the set of groupings.

3. (Currently Amended) The <u>computer implemented</u> method of claim 2 further comprising:

performing the repeating step each time a timer expires.

4.	(Currently Amended) The <u>computer implemented</u> method of claim 1 further comprising:

responsive to identifying an instruction in an instruction cache for execution, determining whether an indicator from the set of indicators is associated with the instruction; and

counting each event associated with execution of the instruction [[if]] <u>provided that</u> the indicator is associated with the instruction to form the data <u>on the execution of the instruction</u>.

5.	(Canceled)

6.	(Canceled)

7.	(Currently Amended) The <u>computer implemented</u> method of claim 1, wherein the data <u>on the execution of the instruction</u> provides an identification of a usage of routines in the compiled program.

8.	(Currently Amended) The <u>computer implemented</u> method of claim 1, wherein the method is <s>located in</s> <u>performed by</u> a scanning daemon.

9.	(Currently Amended) The <u>computer implemented</u> method of claim 1, wherein the grouping is selected from one of a page, a subroutine, or a module in a program.

10.	(Currently Amended) A data processing system for monitoring the execution of a compiled program having a set of groupings, the data processing system comprising:

selecting <u>mechanism</u> [[means]] for selecting a grouping from the set of groupings for the compiled program to form a selected grouping;

<u>determining mechanism for determining, for each instruction in the selected grouping, whether an indicator is present, wherein the indicator is a portion of the instruction and wherein the indicator indicates that data on an execution of the instruction by a processor executing the instruction is to be generated;</u>

<u>sending mechanism, responsive to the determining that the indicator is present, for sending a signal to a performance monitor;</u>

<s>associating means for associating a set of indicators with instructions in the selected grouping within the set of groupings, wherein the set of indicators provides data on the execution of the instructions by a processor executing the instructions;</s>

<s>executing means for executing the compiled program, wherein data is generated in response to a determination that an instruction of the instructions is associated with an indicator in the set of indicators,</s>

~~the data comprising at least one of a number of times each instruction in the selected grouping has been executed and a number of visits to the selected grouping; and~~

generating mechanism for generating the data on the execution of the instruction responsive to the indicator being present during execution of the compiled program; and

~~collecting means~~ storing mechanism for ~~collecting~~ storing the data on the execution of the instruction.

11. (Currently Amended) The data processing system of claim 10 further comprising:

repeating mechanism [[means]] for repeating the selecting mechanism, ~~means, associating means, executing means, and collecting means~~ determining mechanism, sending mechanism, generating mechanism, and storing mechanism for all groupings in the set of groupings.

12. (Currently Amended) The data processing system of claim 11 further comprising:

performing mechanism [[means]] for performing the repeating step each time a timer expires.

13. (Currently Amended) The data processing system of claim 10 further comprising:

determining mechanism [[means]], responsive to identifying an instruction in an instruction cache for execution, for determining whether an indicator from the set of indicators is associated with the instruction; and

counting mechanism [[means]] for counting each event associated with execution of the instruction [[if]] provided that the indicator is associated with the instruction to form the data on the execution of the instruction.

14. (Canceled)

15. (Canceled)

16. (Currently Amended) The data processing system of claim 10, wherein the data on the execution of the instruction provides an identification of a usage of routines in the compiled program.

17. (Currently Amended) The data processing system of claim 10, wherein the selecting mechanism, sending mechanism, generating mechanism, and storing mechanism ~~method is~~ are located in a scanning daemon.

18.    (Currently Amended) A computer program product in a recordable-type computer readable medium for monitoring the execution of a compiled program having a set of groupings, the computer program product comprising:

first instructions for selecting a grouping from the set of groupings for the compiled program to form a selected grouping;

~~second instructions for associating a set of indicators with instructions in the selected grouping within the set of groupings, wherein the set of indicators provides data on the execution of the instructions by a processor executing the instructions;~~

~~third instructions for executing the compiled program, wherein data is generated in response to a determination that an instruction of the instructions is associated with an indicator in the set of indicators, the data comprising at least one of a number of times each instruction in the selected grouping has been executed and a number of visits to the selected grouping; and~~

second instructions for determining, for each instruction in the selected grouping, whether an indicator is present, wherein the indicator is a portion of the instruction and wherein the indicator indicates that data on an execution of the instruction by a processor executing the instruction is to be generated;

third instructions, responsive to the determining that the indicator is present, for sending a signal to a performance monitor;

fourth instructions for generating the data on the execution of the instruction responsive to the indicator being present during execution of the compiled program; and

~~fourth~~ fifth instructions for ~~collecting~~ storing the data on the execution of the instruction.


19.    (Currently Amended) The computer program product of claim 18 further comprising:

[[fifth]] sixth instructions for repeating the first instructions, second instructions, third instructions, fourth instructions, and ~~fourth~~ fifth instructions for all groupings in the set of groupings.


20.    (Currently Amended) The computer program product of claim 19 further comprising:

[[sixth]] seventh instructions for initiating the [[fifth]] sixth instructions each time a timer expires.


21.    (Currently Amended) The computer program product of claim 18 further comprising:

[[fifth]] sixth instructions, responsive to identifying an instruction in an instruction cache for execution, for determining whether an indicator from the set of indicators is associated with the instruction; and

[[sixth]] seventh instructions for counting each event associated with execution of the instruction [[if]] provided that the indicator is associated with the instruction to form the data on the execution of the instruction.

22.    (Canceled)

23.    (Canceled)

24.    (Currently Amended) The computer program product of claim 18, wherein the data on the execution of the instruction provides an identification of a usage of routines in the compiled program.

25.    (Currently Amended) The computer program product of claim 18, wherein the first instructions, second instructions, third instructions, fourth instructions, and fifth instructions method is located in a are executed by a scanning daemon.

26.    (Currently Amended)    A computer implemented method in a data processing system for monitoring the execution of a compiled program having a set of groupings, the computer implemented method comprising: A method in a data processing system for monitoring the execution of a compiled program, the method comprising:

       selecting a grouping from the set of groupings for the compiled program to form a selected grouping;

       determining, for each instruction in the selected grouping, whether an indicator is present, wherein the indicator is a portion of the instruction and wherein the indicator indicates that data for determining a performance efficiency on an execution of the instruction by a processor executing the instruction is to be generated;

       responsive to the determining that the indicator is present, sending a signal to a performance monitor;

       generating, by the performance monitor, the data for determining the performance efficiency on the execution of the instruction to form generated data, responsive to the indicator being present during execution of the compiled program;

       storing, by the performance monitor, the generated data;

       determining, from the generated data, the performance efficiency on the execution of the instruction, to form a determined performance efficiency; and

       reporting the determined performance efficiency to a user.

~~receiving a bundle, wherein the bundle comprises a plurality of instructions and wherein the bundle is a multiple of 128 bits;~~

~~identifying an instruction out of the plurality of instructions in the bundle;~~

~~determining whether the instruction has an associated performance indicator;~~

~~responsive to a determination that a performance indicator is associated with the instruction, transmitting a signal to a performance monitor; and~~

~~processing the instruction.~~

27.     (New) The computer implemented method of claim 4, wherein storing the data on the execution of the instruction further comprises:

storing the data on the execution of the instruction in a counter in the performance monitor.

28.     (New) The data processing system of claim 13, wherein the counting mechanism for counting each event associated with execution of the instruction if the indicator is associated with the instruction to form the data on the execution of the instruction comprises:

a counter in the performance monitor for counting each event associated with execution of the instruction if the indicator is associated with the instruction to form the data on the execution.

29.     (New) The computer program product of claim 21, wherein the fifth instructions for storing the data on the execution of the instruction comprises:

eighth instructions for storing the data on the execution of the instruction in a counter in the performance monitor.